DOCUMENT RESUME

ED 343 462 FL 800 473

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TITLE	Using Computers with Adult ESL Literacy Learners. ERIC Digest.
INSTITUTION	National Clearinghouse on Literacy Education, Washington, DC.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	EDO-LE-90-08
PUB DATE	Nov 90
CONTRACT	RI89166001
NOTE	4p.
PUB TYPE	Information Analyses - ERIC Clearinghouse Products (071)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Adult Education; *Adult Students; Authoring Aids (Programing); *Computer Assisted Instruction; Computer Software; *English (Second Language); Interpersonal Competence; Language Acquisition; *Literacy Education; Word Processing; Writing Instruction
IDENTIFIERS	ERIC Digests

ABSTRACT

An overview is presented of the ways in which various types of computer software and instructional strategies can be used effectively with English-as-a-Second-Language (ESL) adult literacy learners. Computer use in language and literacy development in general is first reviewed. It is then noted that in spite of the progress made in hardware and software development and toward integrating computers into adult ESL language and literacy instruction, the effectiveness of computer assisted instruction (CAI) is still largely dependent on the ability of instructors to choose, adapt, and use computer programs effectively. Some of the problems are discussed, such as the lack of instructional approaches for developing both language and literacy skills simultaneously. Instructors are advised to use software that allows them to alter the content vis an authoring or editing option in the software package, or to design activities within a larger framework. The use of word processors and collaborative writing is also considered. CAI is concluded to be an effective experience for adult ESL literacy learners and their instructors, especially when it is used to facilitate interpersonal communication as well as language and literacy skills development. Contains 18 references. (LB)

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Using Computers With Adult ESL Literacy Learning

ERIC Digest:National Clearinghouse on Literacy Education. An Adjunct ERIC Clearinghouse

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U.S. DEPARTMENT OF EDUCATION
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ERIC National Clearinghouse on Literacy Education
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Digest

Using Computers with Adult ESL Literacy Learners

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November 1990 EDO-LE-90-08

During the 1980s, the microcomputer became an important tool for many educational purposes. The appropriate use of computers with adults acquiring literacy while learning English as a Second Language (ESL) is of critical concern. Researchers and practitioners now realize the important role that computers can play in both second language and literacy instruction and are looking for effective ways to integrate their use into various types of programs. This *Digest* provides an overview of the ways in which various types of computer software and instructional strategies can be used effectively with adult ESL literacy learners.

Computer Use in Language and Literacy Development

Although drill and practice software has a role to play in reinforcing the learning of discrete language skills (e.g., specific grammar points and vocabulary items), the overall trend is away from such behaviorist modes of computer-assisted instruction (CAI), and toward the use of CAI to provide functional and communicative experiences that better serve learners' needs (Stevens, 1989) and help to develop all language skills—reading, writing, listening, and speaking.

These types of software are now used in computer-assisted literacy instruction: drill and practice; tutorial; simulations and games; problem-solving; word processing; and databases and spreadsheets (for workplace literacy exposure). Digitized audio and video recordings, animated graphics, and local area and distance network communication are also in use.

In addition, other newer technologies, including interactive videodiscs, hypermedia, and other forms of multimedia are constantly being explored and expanded. (See Bevilacqua, 1989; Gay & Mazur, 1989; Kerka, 1989.)

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Adults generally have positive attitudes toward computer use and are eager to acquire computer skills for the workplace, and microcomputers have become increasingly available and affordable. Research on the effectiveness of computer use in adult literacy education programs has shown that CAI is effective with a variety of adult learners and gives adults a number of advantages: flexibility of use, control over pacing and sequencing of learning, individualization, privacy, and immediate feedback (Askov, Maclay, & Meenan, 1987; Kulik, Kulik, & Shwalb, 1986; Patton, 1987; Turner, 1988a & b; see also Imel, 1988 for an overview).

Using CAI with Adult Learners

In spite of the progress that has been made in hardware and software development and toward integrating computers into adult ESL language and literacy instruction, the effectiveness of computer-assisted instructional approaches is largely dependent on the ability of instructors to choose, adapt, and use computer programs effectively. The instructional strategies used with learners are as important to successful learning as the quality of the software and hardware used. When using CAI approaches with adult literacy learners who are also learning English, consider:

- Much of the software and many of the instructional approaches now in use focus either on language learning or on literacy development but do not combine the two. Computers can help to develop language and literacy skills simultaneously, but software and instructional techniques uniting these skills are needed.
- Most of the practice and research to date has focused on work with children. The specific concerns and needs of adult ESL literacy learners need to be examined, and appropriate software and instructional strategies designed or adapted. Software designed for children (for example, a program with graphics of rabbits and balls bouncing across the screen) should not be used with adult learners when something more appropriate is available.
- There is relatively little software designed expressly for adult ESL literacy learners, especially those with low-level English language and reading skills. ESL literacy professionals usually must select from programs originally targeted for other users, such as native English speakers with basic skills development needs or elementary students developing literacy skills in English. Existing software must then be adapted for appropriate use. Literacy instructors should review the software and the written directions given and provide preparatory activities so that beginning ESL readers can use the software without becoming frustrated. For example, the instructor might familiarize learners with vocabulary and sentence structures used in the directions and exercises, give an overview of the types of exercises included, and demonstrate how to work through the program.

Instructors should look for software that permits them to alter the content (lexical or otherwise) via an "authoring" or "editing" option in the software program. In this way, for example, difficult or irrelevant vocabulary can be changed without having to recreate the format or template. Some programs provide a choice of activities (e.g., a Cloze exercise where the instructor has control over which words are deleted) and even allow the user to type in a preselected text that is then used in the various activities provided.

Another approach is to use a separate authoring program that allows a curriculum writer to design activities and lessons within a larger framework. The overall template is provided, but the user determines the exact content and type of exercises. Such authoring programs are available for many types of hardware and are relatively easy to use, if one has word processing skills.

Word Processing Programs and Collaborative Writing

Word processing programs can also be used effectively with ESL literacy learners. Word processors, which allow relatively easy revision and the sharing of texts, facilitate a process approach to writing, which places emphasis on choosing meaningful topics, writing in groups, producing multiple drafts, and conferring about drafts. A variety of grammar and style checker programs (in addition to the spelling checkers and thesauri available with most word processors) can help intermediate and advanced language learners to analyze and correct their own writing, both individually and cooperatively.

Pairing learners who speak different native languages in front of the computer terminal is one way to facilitate real communication in English, especially if group work or cooperative learning techniques are used (cf. Johnson & Johnson, 1986; Piper, 1986). Cooperative writing tasks or the use of problem-solving types of software or simulation games can enhance both language and literacy acquisition. Similarly, peer teaching works well on the computer. Learners with more developed reading and keyboarding skills can direct their fellow learners toward successful computer use. Those they are coaching can ask for clarification without risking embarrassment in front of the class.

In the realm of adult ESL literacy education, educators have just begun to explore the possibilities that technology, particularly computer-assisted instruction, offers the learner. Some activities have been pursued with elementary and secondary ESL students: interactive writing within a classroom on a local area computer network (Peyton & Batson, 1986); and classroom exchanges via electronic mail or bulletin boards, including cooperative projects such as data gathering, newsletter production, and "pen pal videos" (Levin, Riel, Rowe, & Boruta, 1985; Milheim, 1989; Riel, 1987; Sayers, 1988, 1989). However, little has been done to see if these same types of strategies work with adult ESL literacy learners. Other uses of the computer—as a tool for ESL literacy assessment, database formation, and information retrieval—have yet to be explored. Much investigation and research remain to be done.

Conclusion

Using CAI software and approaches can be an exciting and rewarding experience for adult ESL literacy learners and their instructors, especially when these tools are used to facilitate interpersonal communication alongside language and literacy skills development. The use of computers can create a new social and instructional environment for language learning and literacy acquisition. The prospects for using computer-assisted instructional programs and other technological media with adult ESL literacy learners are excellent, provided that programs are designed or adapted especially for these learners and that instructors are willing to try new and innovative approaches.

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